

**Application No.** : **10/627,942**  
**Filed** : **July 25, 2003**

IN THE CLAIMS

Please amend Claims 19 and 45, cancel Claims 15 – 18, 41 – 44, and 54 – 56 without  
5 prejudice, and add new Claims 57 – 67 as follows:

1. (Previously presented) An electronics assembly comprising:  
at least one electronics element, said at least one element having at least one circuit  
disposed thereon; and

10 a structure adapted to receive said at least one electronics element and retain said at least  
one element in a substantially fixed position;

said structure further comprising at least one backplane element adapted to electrically  
communicate with said at least one electronics element,

15 said backplane element having a plurality of ports for electrical communication with other  
electronic devices, said plurality of ports comprising a port of a first type and a port of a second  
type, said first type and said second type each having different electrical interface configurations;

wherein said at least one backplane element comprises a substantially unitary and  
removable component from said assembly; and

20 wherein said assembly is further adapted to accommodate a varying number of said  
electronics elements and respective ones of said backplane elements.

2. (Original) The assembly of Claim 1, wherein said plurality of ports comprises at least  
one pigtail connector.

3. (Original) The assembly of Claim 1, wherein said one electronics element comprises a  
substrate having at least one circuit disposed nonlinearly on opposing sides.

25 4. (Original) The assembly of Claim 1, wherein said assembly is used in a DSL system,  
and said backplane element comprises:

a first port adapted to interface electrically with a POTS entity; and

a second port adapted to electrically interface with a DSLAM.

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5. (Previously presented) The assembly of Claim 1, wherein said at least one electronics element is configured to substantially separate a plurality of electrical circuits disposed thereon.

6. (Original) The assembly of Claim 1, wherein said at least one circuit comprises one or more DSL splitter circuits.

7. - 18. (Cancelled)

19. (Currently amended) A backplane assembly, comprising:

a first electrical connector with a first electrical interface configuration;

a first substrate adapted to receive at least part of said first connector;

a plurality of second electrical connectors, said plurality of second electrical connectors each having a second electrical interface configuration, said second electrical interface configuration being different than said first electrical interface configuration;

a second substrate adapted to receive at least a portion of each of said second connectors; structure components maintaining said first and second substrates in substantially fixed

relationship; and

an electrical interface disposed substantially between said first and second substrates;

wherein said electrical interface provides electrical connection between said first connector and at least a portion of said second connectors;

wherein said backplane assembly comprises a substantially unitary and removable component from ~~said housing~~ a housing assembly.

20. (Original) The backplane assembly of Claim 19, wherein said electrical interface comprises a flexible substrate having conductive traces disposed along its surfaces and propagating between corresponding termination points for said first and second substrates.

21. - 34. (Cancelled)

35. (Previously presented) An electronics assembly comprising:

a plurality of electronics elements each having at least one circuit disposed thereon; and

a structure adapted to receive said electronics elements and retain said elements in a substantially fixed position;

said structure further comprising a plurality of backplane elements adapted to electrically communicate with respective ones of said electronics elements,

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said backplane elements having a plurality of ports for electrical communication with other electronic devices, said plurality of ports comprising a first port type and a second port type, said first port type and said second port type each having different electrical interface configurations;

5 wherein said plurality of backplane elements each comprise a substantially unitary and removable component from said electronics assembly; and

wherein said assembly is further adapted to accommodate a varying number of said plurality of electronics elements and respective ones of said backplane elements.

36. (Previously presented) The assembly of Claim 35, wherein said plurality of ports comprises at least one pigtail connector.

10 37. (Previously presented) The assembly of Claim 36, wherein at least a portion of said plurality of electronics elements comprise a substrate having at least one circuit disposed nonlinearly on opposing sides.

38. (Previously presented) The assembly of Claim 36, wherein said assembly is used in a DSL system, and said backplane elements each comprise:

15 a first port adapted to interface electrically with a POTS entity; and  
a second port adapted to electrically interface with a DSLAM.

39. (Previously presented) The assembly of Claim 35, wherein said electronics elements are configured to substantially separate a plurality of electrical circuits disposed thereon.

20 40. (Previously presented) The assembly of Claim 35, wherein said at least one circuit comprises one or more DSL splitter circuits.

41. – 44. (Canceled)

45. (Currently amended) A backplane assembly, comprising:  
a first electrical connector with a first type of electrical interface configuration;  
a first substrate adapted to be in electrical communication with said first connector;  
25 a plurality of second electrical connectors; said plurality of second electrical connectors each having a second type of electrical interface configuration; wherein said second type of electrical interface configuration is different than said first type of electrical interface configuration;

30 a second substrate adapted to be in electrical communication with each of said second connectors;

structure components maintaining said first and second substrates in substantially fixed relationship; and

an electrical interface disposed substantially between said first and second substrates;

wherein said electrical interface provides electrical connection between said first

connector and at least a portion of said second connectors; and

wherein said backplane assembly comprises a substantially unitary and removable component from ~~said housing~~ a housing assembly.

46. (Previously presented) The backplane assembly of Claim 45, wherein said electrical interface comprises a flexible substrate having conductive traces disposed along its surfaces and propagating between corresponding termination points for said first and second substrates.

47. (Canceled)

48. (Previously presented) An electronics assembly comprising:

a structure adapted to receive at least one electronics element and retain said at least one element in a substantially fixed position;

said structure further comprising at least one backplane element adapted to electrically communicate with said at least one electronics element;

said backplane element having a plurality of ports for electrical communication with other electronic devices, said plurality of ports comprising a port of a first port type and a port of a second port type; said first port type and said second port type each having different electrical interface configurations;

wherein said at least one backplane element comprises a substantially unitary and removable component from said assembly; and

wherein said assembly is further adapted to accommodate a varying number of said electronics elements and respective ones of said backplane elements.

49. (Previously presented) The assembly of Claim 48, wherein said plurality of ports comprises at least one pigtail connector.

50. (Previously presented) The assembly of Claim 48, wherein said at least one electronics element comprises a substrate having at least one circuit disposed nonlinearly on opposing sides.

51. (Previously presented) The assembly of Claim 48, wherein said assembly is used in a DSL system, and said backplane element comprises:

a first port adapted to interface electrically with a POTS entity; and  
a second port adapted to electrically interface with a DSLAM.

5 52. (Previously presented) The assembly of Claim 48, wherein said at least one electronics element is configured to substantially separate a plurality of electrical circuits disposed thereon.

53. (Previously presented) The assembly of Claim 48, wherein said at least one circuit comprises one or more DSL splitter circuits.

10 54. – 56. (Canceled)

57. (New) The electronics assembly of Claim 1, further comprising a plurality of capacitive elements disposed proximate said at least one backplane element, said capacitive elements adapted to provide high-pass filter functionality to said electronics assembly.

15 58. (New) The electronics assembly of Claim 35, further comprising a plurality of capacitive elements disposed proximate at least one of said plurality of backplane elements, said capacitive elements adapted to provide high-pass filter functionality to said electronics assembly.

59. (New) The electronics assembly of Claim 48, further comprising a plurality of capacitive elements disposed proximate said at least one backplane element, said capacitive elements adapted to provide high-pass filter functionality to said electronics assembly.

20 60. (New) An electronics assembly comprising:  
at least one electronics element, said at least one element having at least one circuit disposed thereon; and

a structure adapted to receive said at least one electronics element and retain said at least one element in a substantially fixed position;

25 said structure further comprising at least one backplane element adapted to electrically communicate with said at least one electronics element,

said backplane element having a plurality of ports for electrical communication with other electronic devices, said plurality of ports comprising a port of a first type and a port of a second type, said first type and said second type each having different electrical interface configurations;

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wherein said at least one backplane element comprises a substantially unitary and removable component from said assembly; and

wherein said assembly is further adapted to accommodate a varying number of said electronics elements.

5        61. (New)        The assembly of Claim 60, wherein said plurality of ports comprises at least one pigtail connector.

62. (New)        The assembly of Claim 60, wherein said assembly is used in a DSL system, and said backplane element comprises:

a first port adapted to interface electrically with a POTS entity; and

10       a second port adapted to electrically interface with a DSLAM.

63. (New)        The assembly of Claim 60, wherein said at least one circuit comprises one or more DSL splitter circuits.

64. (New)        An electronics assembly comprising:

15       at least one electronics element, said at least one element having at least one circuit disposed thereon; and

a means for receiving said at least one electronics element and a means for retaining said at least one element in a substantially fixed position;

said means for receiving further comprising at least one backplane element having means for electrically communicating with said at least one electronics element,

20       said backplane element having a plurality of ports for electrical communication with other electronic devices, said plurality of ports comprising a port of a first type and a port of a second type, said first type and said second type each having different electrical interface configurations;

wherein said at least one backplane element comprises a substantially unitary and removable component from said assembly; and

25       wherein said assembly is further adapted to accommodate a varying number of said electronics elements and respective ones of said backplane elements.

65. (New)        A backplane assembly, comprising:

a first electrical connector with a first electrical interface configuration;

a first means for receiving at least part of said first connector;

30       a plurality of second electrical connectors, said plurality of second electrical connectors

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each having a second electrical interface configuration, said second electrical interface configuration being different than said first electrical interface configuration;

a second means for receiving at least a portion of each of said second connectors;

means for maintaining said first and second means for receiving in a substantially fixed

5 relationship; and

an electrical interface disposed substantially between said first and second substrates;

wherein said electrical interface comprises means for providing an electrical connection between said first connector and at least a portion of said second connectors;

wherein said backplane assembly comprises a substantially unitary and removable

10 component from a housing assembly.

66. (New) An electronics assembly comprising:

at least one electronics element, said at least one element having at least one circuit disposed thereon; and

15 a structure adapted to receive said at least one electronics element and retain said at least one element in a substantially fixed position;

said structure further comprising a backplane assembly adapted to electrically communicate with said at least one electronics element, said backplane assembly, comprising:

a first electrical connector with a first electrical interface configuration;

a first substrate adapted to receive at least part of said first connector;

20 a plurality of second electrical connectors, said plurality of second electrical connectors each having a second electrical interface configuration, said second electrical interface configuration being different than said first electrical interface configuration;

a second substrate adapted to receive at least a portion of each of said second connectors;

25 structure components maintaining said first and second substrates in substantially fixed relationship; and

an electrical interface disposed substantially between said first and second substrates;

30 wherein said electrical interface provides electrical connection between said first connector and at least a portion of said second connectors; and

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wherein said backplane assembly comprises a substantially unitary and removable component from said structure adapted to receive said at least one electronics element; and

wherein said assembly is further adapted to accommodate a varying number of said electronics elements.

5 67. (New) An electronics assembly comprising:

a structure adapted to receive at least one electronics element and retain said at least one element in a substantially fixed position;

said structure further comprising at least one backplane assembly adapted to electrically communicate with said at least one electronics element;

10 said at least one backplane assembly, comprising:

a first electrical connector with a first electrical interface configuration;

a first substrate adapted to receive at least part of said first connector;

15 a plurality of second electrical connectors, said plurality of second electrical connectors each having a second electrical interface configuration, said second electrical interface configuration being different than said first electrical interface configuration;

a second substrate adapted to receive at least a portion of each of said second connectors;

structure components maintaining said first and second substrates in substantially fixed relationship; and

20 an electrical interface disposed substantially between said first and second substrates;

wherein:

said electrical interface provides electrical connection between said first connector and at least a portion of said second connectors;

25 said at least one backplane assembly comprises a substantially unitary and removable component from said structure adapted to receive said at least one electronics element; and

30 said electronics assembly is further adapted to accommodate a varying number of said electronics elements and respective ones of said at least one backplane assembly.